

Wednesday November 13th, 2019

Analysis of a Lamborghini Diablo Firmware Calculator

Mr Farouk MEDDAH – Teacher-Researcher at
Constantine 3 University

9H00-10H30

Room 35

Description

The programming of the electronic chips is present everywhere. Vehicle calculator is one of the chips using very small industrial microcontrollers. This workshop will highlight the construction and programming of this type of chips. In the hardware part, the electronic construction of this calculator will be detailed, exposing the main components and their wiring, the working of each block and how these components communicate with each other (data flow).

In the software part (Firmware), we give an analysis of the program starting with its structure, then the writing of the disassembly program of the binary code. Then, each block of code will be explained and criticized in terms of working and organization. Moreover, we will see the method of the transition to a high-level language, for example, from the assembly to the C language. Finally, the few errors that are made by the developers of this program, will be detected and then corrected.

Prerequisites

- All students from M1 and M2 can participate.